

SW RGBHV Switcher Series

Two, Four, and Six Input Analog RGBHV and Stereo Audio Switchers



COMMON FEATURES

- Inputs: Two, four, and six input analog RGBHV models with or without stereo audio; video on BNC connectors; audio on captive screw connectors
- Output: One set of female BNC connectors for video; one captive screw connector for audio
- Compatible with RGBHV, RGBS, RGSB, RsGsBs, HDTV, component video, S-video, and composite video
- 350 MHz (-3 dB) RGB video bandwidth
- Autoswitching capabilities
- Automatically detects which inputs have an active signal and reports this information through the RS-232 port
- RS-232 and contact closure remote control
- Internal international power supply
- Audio input gain and attenuation

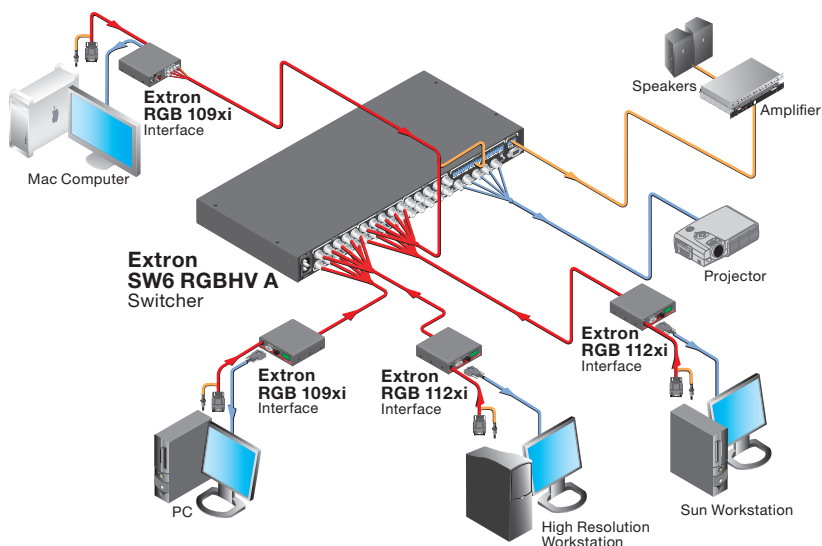
DESCRIPTION

The Extron **SW RGBHV Series** are active analog RGBHV switchers using BNC connectors. There are six switchers in the series. The **SW2 RGBHV**, **SW4 RGBHV**, and **SW6 RGBHV** are two, four, and six input, one output RGBHV video-only switchers, respectively. The **SW2 RGBHV A**, **SW4 RGBHV A** and **SW6 RGBHV A** are also two, four, and six input, one output RGBHV switchers with audio.

All models allow multiple RGBHV, RGBS, RGSB, RsGsBs, RGB source inputs with composite video/sync or component video with stereo audio sources to be switched to one compatible display device. With 350 MHz (-3 dB) RGB video bandwidth, the SW RGBHV A Series switchers can support a wide array of high resolution signals.

The SW RGBHV A Series include captive screw audio connectors for balanced and unbalanced stereo audio sources. They also include adjustable gain and attenuation, allowing users to set the individual input audio levels, providing no significant difference in volume when switching between sources. All of the switchers can be controlled via the front panel buttons or through a 9-pin remote control port. The 9-pin female D connector enables RS-232 control, as well as contact closure control. They are also compatible with the Extron KP 6 Keypad Remote Control and the Extron IR 102 Kit IR remote.

Each switcher is user-configurable for manual or autoswitching modes. The autoswitch function can be enabled or disabled via a toggle switch on the back panel. Autoswitching allows any input of the switcher to be selected automatically when the switcher detects a sync signal. Two input models are half rack width, 1U metal enclosures that fit into an optional Extron 1U Universal Rack Shelf Kit. Four and six input models are 1U, full rack width and ship with rack ears.



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SW RGBHV Switcher Series

SW2 RGBHV

Two Input Analog RGBHV Switcher

UNIQUE FEATURES

- 1U, half rack width enclosure



MODEL

VERSION DESCRIPTION

PART

SW2 RGBHV

Two Input RGBHV 60-491-01

SW4 RGBHV

Four Input Analog RGBHV Switcher

UNIQUE FEATURES

- 1U, full rack width enclosure
- Rack mount brackets included



MODEL

VERSION DESCRIPTION

PART

SW4 RGBHV

Four Input RGBHV 60-492-01

SW6 RGBHV

Six Input Analog RGBHV Switcher

UNIQUE FEATURES

- 1U, full rack width enclosure
- Rack mount brackets included



MODEL

VERSION DESCRIPTION

PART

SW6 RGBHV

Six Input RGBHV 60-493-01

Continued →

SW RGBHV Switcher Series

SW2 RGBHV A

Two Input Analog RGBHV and Stereo Audio Switcher

UNIQUE FEATURES

- Switches RGBHV video and stereo audio on BNC and captive screw connectors
- Audio input gain and attenuation
- 1U, half rack width enclosure



MODEL

VERSION DESCRIPTION

PART

SW2 RGBHV A

Two Input RGBHV & Audio 60-491-21

SW4 RGBHV A

Four Input Analog RGBHV and Stereo Audio Switcher

UNIQUE FEATURES

- Switches RGBHV video and stereo audio on BNC and captive screw connectors
- Audio input gain and attenuation
- 1U, full rack width enclosure
- Rack mount brackets included



MODEL

VERSION DESCRIPTION

PART

SW4 RGBHV A

Four Input RGBHV & Audio 60-492-21

SW6 RGBHV A

Six Input Analog RGBHV and Stereo Audio Switcher

UNIQUE FEATURES

- Switches RGBHV video and stereo audio on BNC and captive screw connectors
- Audio input gain and attenuation
- 1U, full rack width enclosure
- Rack mount brackets included



MODEL

VERSION DESCRIPTION

PART

SW6 RGBHV A

Six Input RGBHV & Audio 60-493-21

Continued →

SW RGBHV Switcher Series

SW RGBHV Switcher Series Accessories

INCLUDED ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
For SW4 and SW6 models only			
MBD 149	1U, Full Rack Width, Rack Mount and Through-Desk Kit for Four-Piece Enclosure ...	page 757	70-077-03
OPTIONAL ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
RSU 129	1U 9.5" Deep Universal Rack Shelf Kit	page 747	60-190-01
MBU 125	1U, 1/2 & 1/4 Rack Width, Under-Desk Mount Kit for Two-Piece Enclosure	page 743	70-077-01
CCR 204	Four-Button Contact Closure Remote	page 248	60-794-02
CCR 306	Six-Button Contact Closure Remote	page 249	60-795-02
KP 6	Keypad Remote Control	page 249	60-111-20
IR 102 Remote Control Kit	IR to RS-232 or Contact Closure Conversion Kit	page 242	70-224-01
RCAF-BNCM/10	RCA Female-BNC Male, Qty. 10	page 720	100-229-01
CSR 6	Captive Screw - 2 RCA Female Adapter - 6" (15 cm)	page 725	26-575-01

SPECIFICATIONS

VIDEO

Gain	Unity.
Bandwidth	350 MHz (-3 dB)
Crosstalk	-70dB @ 10 MHz
Switching speed	5 ms (max.)

VIDEO INPUT

Number / Signal type	
SW2 RGBHV/RGBHV A	2 RGBHV, RGBS, RGSB, RSGBs, HDTV component video, S-video, composite video (or digital audio)
SW4 RGBHV/RGBHV A	4 RGBHV, RGBS, RGSB, RSGBs, HDTV component video, S-video, composite video (or digital audio)
SW6 RGBHV/RGBHV A	6 RGBHV, RGBS, RGSB, RSGBs, HDTV component video, S-video, composite video (or digital audio)
Connectors	
SW2 RGBHV/RGBHV A	2 x 5 female BNC
SW4 RGBHV/RGBHV A	4 x 5 female BNC
SW6 RGBHV/RGBHV A	6 x 5 female BNC
Nominal level	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB 0.3 Vp-p for R-Y and B-Y of component video, and for C of S-video
Minimum / Maximum levels	Analog: 0.3 V to 1.5 Vp-p with no offset
Impedance	75 ohms
Return loss	<-30 dB @ 10 MHz
DC offset (max. allowable)	5.0V
Input coupling	DC

VIDEO OUTPUT

Number / Signal type	1 RGBHV, RGBS, RGSB, RSGBs, HDTV component video, S-video, composite video (or digital audio)
Connectors	5 BNC female
Nominal level	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB 0.3 Vp-p for R-Y and B-Y of component video, and for C of S-video
Minimum / Maximum levels	0.5 V to 1.5 Vp-p (follows input)
Impedance	75 ohms
Return loss	<-30 dB @ 10 MHz
DC offset	±5 mV maximum with input at 0 offset

SYNC

Input type	RGBHV, RGBS, RGSB, RSGBs, bi-level and tri-level sync
Output type	RGBHV, RGBS, RGSB, RSGBs, bi-level and tri-level sync
Input level	Analog or TTL, 0.5 V to 5.0 Vp-p
Output level	5.0 Vp-p, unterminated, for V output; H output follows input
Input impedance	510 ohms for V input and unselected H input; the selected H input impedance is determined by the device connected to the H output.
Output impedance	75 ohms for V output; the H output impedance is determined by the device connected to the selected H input.
Max input voltage	5.0 Vp-p
Max. propagation delay	35 ns
Max. Rise / Fall time	4 ns
Polarity	Positive or negative (follows input)

AUDIO (SW 2/4/6 RGBHV A ONLY)

Gain	-18 to +24 dB, adjustable
Note: When audio gain is set to unity (0 dB), balanced output will have a 0 dB gain; unbalanced output will be attenuated by 6 dB.	
Frequency response	20 Hz to 20 kHz, ±0.05 dB
THD + Noise	0.03% @ 1 kHz, 0.3% @ 20 kHz at nominal level
S/N	>90 dB at maximum output
Crosstalk	<65 dB @ 20 kHz, <-80 dB @ 1 kHz or below 60 Hz
Stereo channel separation	>80 dB @ 20 Hz to 20 kHz
CMRR	>75 dB @ 20 Hz to 20 kHz

DIGITAL AUDIO (ALL MODELS' H CHANNEL)

Input type	Dolby Digital, DTS, AES/EBU
Output type	Dolby Digital, DTS, AES/EBU
Bandwidth	250 MHz (-3 dB)
Sampling rates	32, 44.1, 48, 96 kHz
Input level	0.5 V to 5.0 Vp-p
Output level	2.5 Vp-p (when terminated with 75 ohms)
Input impedance	510 ohms for unselected inputs; for the selected input, impedance is determined by the device connected to the output
Output impedance	Determined by the device connected to the selected input
Max input voltage	5.0 Vp-p
Max. propagation delay	35 ns
Max. Rise / Fall time	4 ns

AUDIO INPUT (SW 2/4/6 RGBHV A ONLY)

Number / Signal type	2, 4, or 6 (depending on the model) stereo, balanced/unbalanced
Connectors	2, 4, or 6 (depending on the model) 3.5 mm captive screw connectors, 5 pole
Impedance	>10k ohms unbalanced, 20k ohms balanced, DC coupled
Nominal level	-20 dBV (100 mVrms), -10 dBV (316 mVrms), 0 dBu (0.775 Vrms), or +4 dBu (1.23 Vrms), configurable
Maximum level	+20 dBu, (balanced or unbalanced) at 1% THD+N
Input gain adjustment	-24 dB to +18 dB, adjustable per input
Input coupling	DC

AUDIO OUTPUT (SW 2/4/6 RGBHV A ONLY)

Number / Signal type	1 stereo, balanced/unbalanced
Connectors	(1) 3.5 mm captive screw connector, 5 pole
Impedance	50 ohms unbalanced, 50 ohms balanced
Nominal level	-10 dBV (316 mV) or +4 dBu (1.23 V), configurable
Maximum level (Hi-Z)	>26 dBu, balanced; >+20 dBu, unbalanced at 1% THD+N
Maximum level (600 ohm)	>+21 dBm, balanced; >+15 dBm, unbalanced at 1% THD+N

CONTROL / REMOTE — SWITCHER

Serial control port	RS-232, 9-pin female D connector (same as the contact closure port)
Baud rate and protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Serial control pin configurations	2 = TX, 3 = RX, 5 = GND
Contact closure	9-pin female D connector (same as the RS-232 port)
Contact closure pin configurations	1 = input #1, 4 = input #2, 6 = input #3, 7 = input #4, 8 = input #5, 9 = input #6
Program control	Extron's control/configuration program for Windows® Extron's Simple Instruction Set (SIS™)

GENERAL

Power	100 VAC to 240 VAC, 50/60 Hz, 20 watts, internal, autoswitchable
Rack mount	
SW2 RGBHV, SW2 RGBHV A	Yes, with optional 1U rack shelf, part #60-190-01 or 60-604-01
All other models	Yes, with included bracket kit, part #70-077-03
Enclosure type	Metal
Enclosure dimensions	
SW2 RGBHV, SW2 RGBHV A	1.75" H x 8.75" W x 9.5" D (1U high, half rack wide) 4.4 cm H x 22.2 cm W x 24.1 cm D (Depth excludes connectors.)
All other models	1.75" H x 17.5" W x 8.5" D (1U high, full rack wide) 4.4 cm H x 44.5 cm W x 21.6 cm D (Depth excludes connectors.)
Product weight	
SW2 RGBHV	2.4 lbs (1.1 kg)
SW2 RGBHV A	2.5 lbs (1.1 kg)
All other models	7.0 lbs (3.2 kg)
Shipping weight	
SW2 RGBHV, SW2 RGBHV A	5 lbs (3kg)
All other models	12 lbs (6 kg)